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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,318	12/28/2001	Tetsuya Tabe	217803US2	4759

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EXAMINER

MITCHELL, JASON D

ART UNIT PAPER NUMBER

2193

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,318	TABE ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is in response to remarks filed on 4/18/05.
2. At Applicant's request claim 2 was canceled, claims 1 and 3-6 were amended.
Claims 1 and 3-6 are pending in this case.

Response to Arguments

3. Applicant's arguments with respect to the 35 USC 102(b) rejection of claims 1-4 and the 35 USC 103(a) rejection of claims 5-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Applicant's amendment to claim 3 was sufficient to overcome the objection, which is consequently withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/34290 to Koath (Koath) in view of US 5,546,581 to McKinnis et al. (McKinnis) US 6,173,419 to Barnett (Barnett).

Regarding Claim 1: Koath discloses a method of extending debug functions of a debugger system for debugging the operation of a target system (pg. 1, line 3 'This invention relates to system debugging software'), said method comprising: a function module (pg. 5, lines 6-8 'debug object') including option menu information item (pg. 4, lines 24-28 'The PrintMenu function produces menu information') for use in generating an option menu (pg. 4, lines 24-28 'generate menus'), through which a predetermined debug function is controlled (pg. 4, lines 24-28 'control debug objects'); a new function module that has not yet been registered (pg. 2, lines 2-3 'The debugging function providers may request addition to the list of debugging function providers'); registering by the framework module the new function module (pg. 5, lines 6-8 'a request to the main debug task to add the debug object to a main debug task list'); registering said option menu information item by an interface generation unit (pg. 5, lines 15-16 'a list of debug objects') which includes an option menu generation unit (pg 5, lines 15-16 'The PrintTopMenu function produces a menu') displaying said option menu with reference to said option menu information item (pg. 5, lines 11-13 'The router ... receives information produced by the debug objects and sends this information ... for display') in order to control the operation of the debugger system through a manipulation screen thereof (pg.5 lines 16-20 'console operator can use this menu to switch among the different debug objects'); calling said function module corresponding to the debug function with the framework module (pg. 6, 19-21 'the HandleNewInput function calls the corresponding debug object function') when the debug function is selected in the debugger system (pg. 6, lines 19-21 'If the console operator chooses a debugging

function') to use the debug function for debugging the operation of the target system (pg.6 lines 14-17 'causing the main debug task to ... route further console input to the chosen debug object's HandleNewInput function'); and displaying said option menu (pg. 6, lines 1-3 'send ... menus to the main debug task for console display'), in the manipulation screen in order that said debugger system performs debugging in accordance with the debug function as selected by manipulation of said at least on of said option menu (pg. 6, lines 19-21 'If the console operator chooses a debugging function').

Koath does not explicitly disclose providing the new function module as a file stored in a predetermined directory of a host computer, or searching the predetermined directory for the new function module.

McKinnis teaches providing a new function module (col. 8, lines 19-25 'a plurality of discrete subprograms'), as a file stored in a predetermined directory of a host computer (col. 8, lines 19-25 'store the subprogram in a predetermined memory location') and searching the predetermined directory for the new function module (col. 8, lines 19-25 'the main program is capable of identifying the subprogram') in an analogous art for the purpose of 'integrating ... discreet subprograms with a main program' (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the method taught in McKinnis (col. 8, lines 19-25) to allow Koath's 'providers' to 'request addition to the list of debugging function providers' (pg. 2, lines 2-3) thereby providing a means for the debug objects to be 'integrated into the main program' (McKinnis col. 8, lines 39-40).

Art Unit: 2193

Regarding Claim 3: With the exception of the limitations addressed below, claim 3 is a system related to the method of claim 1 and is rejected with the same prior art references; further, Koath discloses a test tool configured to save said function module to be registered in said debugger program so that said function module takes control of the debugging processes (pg. 6, lines 16-17 'route further console input to the chosen debug object') and to enable said function module to be dynamically linked to said debugger program when the function module is registered (pg. 5, lines 6-10 'each debug object ... upon instantiation sends a request ... to add the debug object to a main debug task list').

Please note that while Koath does not explicitly disclose saving the function module, it is inherent in a software system (pg. 2, line 1 'implemented in object-oriented software') that the modules be saved on a computer readable medium.

Regarding Claim 4: Claim 4 is a program product related to the method of claim 1 and is rejected with the same prior art references.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/34290 to Koath (Koath) in view of US 5,546,581 to McKinnis et al. (McKinnis) further in view of US 6,173,419 to Barnett (Barnett).

Regarding Claim 5: Koath discloses a debugger program product comprising a computer readable medium having computer program logic stored therein for debugging the operation of a target system (pg. 1, line 3 'This invention relates to system debugging software'), said debugger program product including: a framework module

(pg. 4, line 7 'a main debug task'); a new function module that has not yet been registered, and registering the new function module (pg. 2, lines 2-3 'The debugging function providers may request addition to the list of debugging function providers'), configured to be dynamically linked to said function module (pg. 4, lines 7-8 'debug objects') which serves to provide a debug function for use in debugging the operation of said target system (pg. 4, lines 11-12 'the debug objects ... provide debugging functions'). But does not disclose a simulator capable of performing the simulation of said target system, or searching a predetermined directory of a host computer for a new function module.

Barnett teaches a simulator capable of performing the simulation of said target system (col. 2, lines 13-16 'an emulated target micro-controller') in order to debug the operation of said target system (col. 2, lines 31-33 'a software debug program that works ... to monitor the emulated micro-controller') in an analogous art for the purpose of providing 'an emulator for debugging software that operates in real time, is economical to create, and may be programmed to have a variety of configurations' (col. 2, lines 6-8).

McKinnis teaches providing a new function module (col. 8, lines 19-25 'a plurality of discrete subprograms'), as a file stored in a predetermined directory of a host computer (col. 8, lines 19-25 'store the subprogram in a predetermined memory location') searching the predetermined directory for the new function module (col. 8, lines 19-25 'the main program is capable of identifying the subprogram') in an analogous art for the purpose of 'integrating ... discreet subprograms with a main program' (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the simulator disclosed in Barnett (col. 2, lines 13-16) to simulate the target system before applying the debug functions disclosed in Koath (pg. 4, lines 7-8) to the simulated target system, because one of ordinary skill in the art would have desired the variety of configurations (col. 2, lines 6-8 'may be programmed to have a variety of configurations') taught in Barnett when debugging the system disclosed in Koath (pg. 3, lines 21-24 'The terminal 12 provides slots that accept different hardware cards').

Further, it would also have been obvious to a person of ordinary skill in the art at the time of the invention to use the method taught in McKinnis (col. 8, lines 19-25) to allow Koath's 'providers' to 'request addition to the list of debugging function providers' (pg. 2, lines 2-3) thereby providing a means for the debug objects to be 'integrated into the main program' (McKinnis col. 8, lines 39-40)

Regarding Claim 6: The rejection of claim 5 is incorporated further; Koath discloses that said function module including an option menu information item (pg. 4, lines 24-28 'The PrintMenu function produces menu information') for use in generating an option menu (pg. 4, lines 24-28 'generate menus') through which a predetermined debug function is controlled (pg. 4, lines 24-28 'control debug objects'); and wherein said framework module refers to said option menu information item for creating said option menu (pg. 5, lines 11-13 'The router ... receives information produced by the debug objects and sends this information ... for display') with reference to the option menu information item in response to a request by a user in order to control the operation of

the debugger system through a manipulation screen thereof (pg.5 lines 16-20 'console operator can use this menu to switch among the different debug objects').

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Mitchell
7/7/05



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